2.0 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

Introduction

2.1 This chapter explains the EIA methodology and describes the ES structure and content. In particular, it details the process of identifying and assessing the likely significant environmental effects of the Development on the environment.

2.2 The ES has been prepared in accordance with the *Town and Country Planning (Environmental Impact Assessment) Regulations 2017*, as amended[i] (the EIA Regulations), as amended, and reference has also been made to currently available good practice guidance on EIA including the Planning Practice Guidance issued by the Ministry of Housing, Communities and Local Government[ii].

Scoping

2.3 Scoping involves focusing the content of an ES on issues of significance. It is an important tool for identifying the likely significant effects of a proposed development through its design, construction and completed phases and ensures that appropriate mitigation options are considered where necessary.

2.4 An EIA Scoping Report (Appendix 2.1) was submitted to Medway Council (MC) on 23rd July 2020 (ref: MC/20/1807). The EIA Scoping Report aimed to scope out all assessment topics where significant effects on the environment were unlikely. MC adopted its EIA Scoping Opinion on 18th September 2020 (Appendix 2.2). The issues raised in the adopted EIA Scoping Opinion and the location where they are addressed in the ES are set out in Table 2.1 below.

Table 2.1: Issues Raised in the EIA Scoping Process

Issue Raised in Adopted Scoping Opinion	ES Chapter where addressed
'*The matters raised by Highways England in its letter dated 29th July 2020 and Medway Council's Integrated Transport team in its email dated 29th July 2020 regarding the content of the Transport Assessment and Travel Plan*'. In particular, this relates to consultation with Highways England to agree the scope of spatial scope of modelling for the Chapter. Highways England also request that all transport impacts, including noise, vibration and air quality are to be assessed and mitigated as necessary.	Chapter 10 Transport and Access
'*The matters raised by Kent County Council Archaeological Advice Service in its letter dated 31 July 2020 on the need for an Archaeological and Geoarchaeological Desk Based Assessment and Deposit Model*'.	An Archaeological and Geoarchaeological Desk Based Assessment and Deposit Model have been

Issue Raised in Adopted Scoping Opinion	ES Chapter where addressed
	submitted in support of the planning application. Barton Willmore sent an e-mail to MC setting out that these reports would be prepared and submitted outside of the ES and e-mail correspondence dated 16th September 2020 from MC acknowledged this (refer to Appendix 2.3).
'*The matters raised by Medway Council's Flood and Drainage team in its letter received 6 August 2020 regarding the content and modelling to be included in the Flood Risk Assessment*'. In particular, with regards to the consideration of on-site capacity under a tide-locked scenario for a range of events up to and including the 100 year+40% climate change event. It was also raised that Sustainable Drainage Systems (SuDS) should be employed and modelled within the Flood Risk Assessment.	Chapter 9 Water Resources and Flood Risk
'*The matters raised by Natural England in Annex A of its letter dated 6 August 2020*'. In particular, it was raised that the ES must consider any impacts upon local wildlife, geological sites and effects on protected species. The Natural England scoping response also requested that the relevant National Character Areas are referred to in the assessment of Landscape effects.	Chapter 8 Biodiversity, Chapter 7 Landscape and Views.
'*The matters raised by Medway Council's Environmental Protection team in its emails dated 7 August 2020 and 12 August 2020 regarding the need for a Noise Assessment and Contaminated Land Study*'.	A Noise Assessment and a Remediation Strategy have been submitted in support of the planning application.
'*The matters raised by Kent County Council (KCC) Ecological Advice Service in its letter dated 7 August 2020 including the need for an aquatic/intertidal invertebrate survey, otter survey and seal survey*'. These comments from KCC Biodiversity relate to three items: *'Invertebrate survey is listed, and our understanding from the Preliminary Ecological Appraisal and Ecology Survey Report is that this is limited to terrestrial invertebrates. We advise that aquatic / intertidal invertebrate surveys are also necessary to fully appraise the current ecological value of waterbodies on the site and the surrounding intertidal and subtidal mudflats around the site, particularly in relation to the assessment of impacts to the Medway Estuary and Marshes SSSI, SPA and Ramsar and the Medway Estuary Marine Conservation Zone (the latter with particular reference to tentacled lagoon worms).'* *'Otter survey is listed, and our understanding from the Preliminary Ecological Appraisal and Ecology Survey Report is that no specific surveys for otters will be carried out, but that checks for otter signs will be made during water vole and badger surveys. We are not satisfied with this approach and advise that specific otter surveys must be undertaken. While otters are becoming widespread in many counties of England, Kent has not seen the same pace of otter returns. Otter presence at low density is much more difficult to detect and requires specific survey work to inform ES conclusions.'*	Chapter 8 Biodiversity provides responses to the comments provided.

Issue Raised in Adopted Scoping Opinion	ES Chapter where addressed
'No seal surveys are proposed. Biological records show that harbour (or common) seals have been recorded within the site boundary and grey seals within 1km of the site and it is concluded in the Preliminary Ecological Appraisal that there is suitable habitat for seals to haul out on within the site. We advise that seal surveys are necessary to inform conclusions regarding their use of the site and surrounds, whether impacts are likely as a result of the proposed development, and any measures necessary to avoid and / or mitigate for impacts.'	
'*The matters raised by Environment Agency in its letter dated 8 September 2020 including the need for eel habitat survey and impact on migration routes*'	Chapter 8 Biodiversity
'*The matters raised by Historic England in its letter dated 10 September 2020 including the need for a Heritage Assessment'*	Chapter 2 EIA Methodology
'*Appropriate Assessment for bird mitigation and impact on SAMMS*'	Chapter 8 Biodiversity

2.5 The topics scoped out of the ES and explanatory justification is provided in Table 2.2.

Table 2.2: Topics Scoped Out of the ES

Assessment Topic	Justification for Scoping out of the ES
Land Contamination	Three phases of ground investigation have been conducted at the Site to support the Environmental permit surrender process, alongside establishing potential contaminated land liabilities under Part IIA of the Environmental Protection Act 1990 and Environmental Damage Regulations 2009. These ground investigations have generally identified low levels of contaminants across the majority of the Site. Each land parcel will require a remediation plan to facilitate site redevelopment to ensure that the remedial works undertaken are sufficient to achieve permit surrender, and therefore mitigate against any potentially significant effects, should they arise. All remedial works to remove contamination at the Site have been agreed with the Environment Agency (EA) in principle. All remediation works will be undertaken during the construction phase, in line with all applicable legislation and guidance to ensure there will be no likely significant effects on the environment. The Remediation Strategy agreed with the EA has been submitted in support of the planning application. Therefore, land contamination has been scoped out as a topic of the ES. Barton Willmore sent an e-mail to MC setting out that a Contaminated Land Study would be prepared and submitted outside of the ES and e-mail correspondence dated 16th September 2020 from MC acknowledged this (refer to Appendix 2.3).
Noise and Vibration	The design of the Development has incorporated inherent noise mitigation measures. These measures include acoustic fencing up to 3m in height on top of the zone for a flood defence bund on Parcel 1 and the existing flood defence in the northern part of Parcel 2. The Noise Assessment submitted in support of the planning application states that significant adverse noise effects from the Development are not anticipated. Barton Willmore sent an e-mail to MC setting out that a Noise Assessment would be prepared and submitted outside of the ES and e-mail correspondence dated 16th September 2020 from MC acknowledged this (refer to Appendix 2.3). Noise and vibration effects on ecological receptors have been assessed within Chapter 8 Biodiversity of the ES. On the above, this topic has been scoped out of the ES.

Assessment Topic	Justification for Scoping out of the ES
Wind Microclimate	Likely significant wind effects are not anticipated given that the Development comprises industrial and commercial uses that would not include large areas of public realm and outdoor amenity space where the public or site users would experience significant wind effects. Therefore, this topic has been scoped out of the ES.
Daylight, Sunlight and Overshadowing	A number of the identified important ecological features are thermophilic such as reptiles and some species of invertebrates, and therefore modelling was carried out to ensure the retained habitats would not be affected by overshading of the proposed new buildings to the extent that they would reduce quality for thermophilic species. The modelling used 'SunCalc' to test all relevant building plots where buildings could cast shade onto these habitats to ensure they received at least 8 hours of sun per day, using a worst-case scenario of the maximum building heights at the edge of the plot. Full details of the methodology and the results of the modelling are set out in Appendix 8.7. As a result of the modelling, a 40m no-building zone is shown on the Parameter Plan along the eastern end of the Parcel 4 build plot. The scale and massing of the Development will not cause changes to daylight or sunlight availability or cause overshadowing of residents or amenity space. On the basis of the above inherent mitigation, this topic has been scoped out of the ES.
Agricultural Land	The Site is located on the site of the former Kingsnorth Power Station and predominantly comprises previously developed land. As no loss of agricultural land will occur, this topic has been scoped out of the ES.
Lighting	During a consultation meeting between Barton Willmore and MC officers on 9th March 2021, it was agreed that, due to existing land uses surrounding the Site, an assessment of effects from lighting on the character of the night sky would not be necessary as part of the landscape and visual impact assessment. Therefore, it has been scoped out of this assessment.
Waste	The Development is not anticipated to produce significant amounts of waste to the extent that the creation or disposal of which would give rise to significant effects on the environment. A Construction Environmental Management Plan (CEMP) to be secured by a planning condition following planning approval, would detail the mitigation measures to be implemented during the construction phase to minimise waste and ensure that it is stored, managed, collected and disposed of appropriately. Earthworks will be designed such that they result in the most sustainable solution being adopted, normally one that minimises the need for off-site disposal by reuse of materials on-site. Where such a solution is possible, the works will be undertaken in compliance with a Materials Management Plan prepared in accordance with the CL:AIRE Definition of Waste: Development Industry Code of Practice. Operational waste would be stored, sorted and disposed of in line with all applicable legislation and not be likely to give rise to significant effects on the environment. This topic has therefore been scoped out of the ES.
Accidents and Disasters	The Site is not in a location which is at risk of disasters such as, land instability or earthquakes. An assessment of the Development's likely significant effects on flooding and climate change (including its vulnerability to climate change effects) are set out in Chapter 9 Water Resources and Flood Risk and Chapter 12 Climate Change of the ES, respectively. During construction, all applicable health and safety legislation will be complied with. The CEMP will detail responsibilities with regards to compliance with this legislation and implement any standard mitigation measures. Similarly, during the operational phase of the Development, all health and safety legislation relating to the Development will be followed. No likely significant effects are anticipated and therefore this topic has been scoped out of the ES.
Human Health	Human health, as a separate consideration, has been scoped out of the ES. No residential uses are proposed on the Site, with very few residential receptors located in the vicinity of the Site. There is no anticipated impact on primary healthcare services, as no population generation is expected from the Development given the nature of its uses and therefore no likely significant

Assessment Topic	Justification for Scoping out of the ES
	effects on healthcare are anticipated. Human health has been considered in Chapter 10 Transport and Access and Chapter 11 Air Quality of the ES, respectively. During the construction and operational phases of the Development, all health and safety at work legislation will be complied with to negate any effects on human health. Therefore, this topic has been scoped out of the ES.

Cultural Heritage

2.6 There are no scheduled monuments or listed buildings on or directly adjacent to the Site. The closest Listed Building is Lancer's Farmhouse, approximately 250m northwest of the Site, with the second closest Listed Building at White Hill House, approximately 910m northeast of the Site. The nearest scheduled monument to the Site is the Fort Darnet Scheduled Monument is the closest Scheduled Monument, located approximately 1km to the south of the Site, across the River Medway.

2.7 Historic England's EIA Scoping response (refer to Appendix 2.2) stated that *'The proposal's impact upon heritage would not trigger require an EIA on its own. However, if there are other environmental impacts that need to be considered alongside archaeology (which the Scoping Report indicates there is) then an EIA would be required. If an EIA is not required, then heritage impacts will still need to be assessed as part of a separate Desk-Based Assessment and Heritage Impact Assessment.'* On this basis, a Heritage Impact Assessment for the Development has been prepared and included as part of the ES (refer to Appendix 2.4).

2.8 With regards to archaeological assets, the Site has been previously developed and it is likely that groundworks would have truncated any buried archaeology. Barton Willmore sent an e-mail to MC setting out that an Archaeological and Geoarchaeological Desk Based Assessment would be prepared and submitted outside of the ES and e-mail correspondence dated 16th September 2020 from MC acknowledged this (refer to Appendix 2.3). An Archaeological and Geoarchaeological Desk Based Assessment has been submitted in support of the planning application. Therefore, archaeology has been scoped out of the ES.

Consultation Process

2.9 Consultation was undertaken with the local community, MC, nearby parish councils and local and regional stakeholders. Consultation with the local community commenced on 3rd February 2021. An information leaflet for the local community was hand delivered to approximately 5,000 addresses in the vicinity of the Site, and information was also sent out electronically via email to Councillors and stakeholders. The leaflet asked for comments on the application to be submitted by 24th February 2021.

2.10 On 3rd February 2021, a consultation website was launched (www.medwayone.co.uk). The website provided details of the consultation and included a public virtual exhibition room, which was available to be viewed at any time until the end of the consultation period on 26th February 2021. There was also a 'flythrough' video. with an audio overview to provide an example of how the Site could be configured when built out. Information and details of how to join the public question and answer sessions was available on the website. Consultation materials such as the feedback form, information leaflet, O&A presentation slides and exhibition boards were available to download from the website.

2.11 On February 11th 2021, the first public 'question and answer' (Q&A) session was held on Zoom. A further Q&A session was arranged to take place on 13th February 2021, but this was cancelled due to a lack of uptake for the session. The final Q&A session was held on February 15th 2021. The sessions included a presentation of the proposals by the Applicant's project team and allowed time for any questions from the public, answered live by the project team.

2.12 200 people responded via the website, telephone, post and by email. The issues raised by the local community and key statutory stakeholder consultation process are discussed further in Chapter 4 Alternatives and Design Evolution of the ES and the Statement of Community Involvement submitted in support of the planning application.

Assessment Methodology

2.13 The EIA Regulations stipulate that an ES should identify, describe and assess the likely significant effects of a development on the environment. Therefore, this ES identifies and assesses the likely significant effects of the Development in relation to both the construction and operational phases. Environmental effects have been evaluated with reference to definitive standards and legislation where available. Where it has not been possible to quantify effects, qualitative assessments have been carried out, based on available knowledge and professional judgement. Where uncertainty exists, this has been noted in the relevant assessment chapter.

Structure of Technical Chapters

2.14 Each technical chapter of the ES (Chapters 6-12) has been set out broadly in line with Table 2.3 below.

Table 2.3: Structure of the Technical Chapters

Heading	Content
Introduction	Each of the technical chapters begins with an introduction providing context to the EIA completed.
Policy Context	This section includes a summary of policies of relevance to the environmental discipline and explains its purpose in the context of the Development and the ES.
Assessment Methodology	This section describes the method and approach employed in the assessment of likely significant effects, the criteria against which the significance has been evaluated, the sources of information used and any technical difficulties encountered. Relevant legislation is also identified.
Baseline Conditions	This section describes and evaluates the baseline environmental conditions i.e. the current situation and anticipated changes over time assuming the Site remains undeveloped.
Likely Significant Effects	This section identifies the likely significant effects on the environment resulting from the Development during construction and operational phases. A description of the likely significant effects of the Development and an assessment of their predicted significance is provided.
Mitigation Measures	This section describes the measures which would be implemented to mitigate against potential adverse impacts. Where possible, enhancement measures have also been proposed.
Residual Effects	The residual effects, i.e. the remaining effects of the Development assuming implementation of the proposed mitigation measures, have been estimated and presented.
Cumulative Effects	This section considers the cumulative effects of the Development with committed developments identified within the vicinity of the Site. Any likely significant effects on the environment arising in this respect are set out in this section.
Summary	Each technical chapter concludes with a brief summary outlining the potential residual effects for the construction phase (short/medium) and operation (medium/long-term) phase of the Development.

Baseline Conditions

2.15 The ES includes a description of the prevailing environmental conditions, the 'Baseline Conditions', against which the likely significant environmental effects of the Development have been assessed. These are taken to be the conditions at the time or immediately prior to the submission of the planning application in 2021. Each technical assessment has also identified the Future Baseline conditions in the absence of the Development.

Determining Significance

2.16 It is broadly accepted that significance reflects the relationship between two factors:

- The actual change taking place to the environment (i.e. the magnitude or severity of an effect); and
- The sensitivity, importance or value of the affected resource or receptor.

Magnitude

2.17 The magnitude of an effect is often quantifiable in terms of, for example, extent of land take, or predicted change in noise levels. A methodology for determining the scale, or magnitude, of effect is set out in Table 2.4 below.

Table 2.4: Methodology for Assessing Magnitude

Magnitude of Impact	Criteria for Assessing Effect
Major	Total loss or major/substantial alteration to key elements/features of the baseline conditions such that the post development character/composition/attributes will be fundamentally changed.
Moderate	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed.
Minor	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character / composition / attributes of the baseline condition will be similar to the pre-development circumstances/situation.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.

Sensitivity

2.18 The sensitivity, importance or value of the resource or receptor is normally derived from:

- Legislative controls;
- Designated status within the land use planning system;
- The number of individual receptors such as residents;
- An empirical assessment on the basis of characteristics such as rarity or condition; and/or
- Ability of the receptor to absorb change.

2.19 The sensitivity of a receptor is based on the relative importance of the receptor using the scale in Table 2.5 below.

Table 2.5: Methodology for Assessing Sensitivity

Sensitivity	Examples of Receptor
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character, or is of international or national importance.
Moderate	The receptor/resource has moderate capacity to absorb change without significantly altering its present character, or is of high importance.
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance.

Significance

2.20 The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the impacts can be beneficial or adverse. Table 2.6 below shows how magnitude and sensitivity interact to derive effect significance.

Table 2.6: Methodology for Assessing Significance

Magnitude	Sensitivity		
	High	Moderate	Low
Major	Major Adverse/Beneficial	Major - Moderate Adverse/Beneficial	Moderate - Minor Adverse/Beneficial
Moderate	Major - Moderate Adverse/Beneficial	Moderate - Minor Adverse/Beneficial	Minor Adverse/Beneficial
Minor	Moderate - Minor Adverse/Beneficial	Minor Adverse/Beneficial	Minor Adverse/Beneficial - Negligible
Negligible	Negligible	Negligible	Negligible

2.21 The above magnitude and significance criteria have been provided as a guide for technical specialists to assess impact significance. Where discipline specific methodology has been applied that differs from the generic criteria above, this has been clearly explained within the given chapter under the heading 'Assessment Methodology'.

Mitigation

2.22 Any adverse environmental effects have been considered for mitigation at the design stage and, where practicable, specific measures have been put forward. Where the effectiveness of the mitigation proposed has been considered uncertain, or where it depends upon assumptions of operating procedures, data and/or professional judgement has been introduced to support these assumptions.

2.23 Mitigation recommended during the demolition and construction phase would be set out in the CEMP to be agreed with MC prior to the commencement of work and implemented throughout the duration of the works. Outline mitigation measures to be included in a future CEMP are set out in Chapter 5 Construction Methodology and Sequencing of the ES.

2.24 Mitigation to be implemented during the Development's operational phase would be secured through planning conditions and obligations. Mitigation is set out in Chapters 6 to 12 of the ES, where relevant.

Cumulative and Interactive Effects

Cumulative Effects

2.25 A requirement of the EIA Regulations is to assess cumulative effects. Cumulative effects are generally considered to arise from the combination of effects from the Development and from other proposed or permitted schemes in the vicinity, acting together to generate elevated levels of effects. The assessment has been informed by paragraph 5(e) of Schedule 4 of the EIA Regulations, which states:

> *'A description of the likely significant effects of the development on the environment resulting from, inter alia:*
> *…*
> *(e) the cumulation of effects with other existing and/ or approved projects…'*

2.26 The ES duly considers the potential for likely significant effects on the environment resulting from *'existing and/ or approved'* developments in the area coming forward at the same time as the Development. In addition, schemes which may not yet have received planning permission but which could be approved during the determination period of the planning application have been considered.

2.27 The schemes that have been included as part of the cumulative effects assessment are those set out in Table 2.7 and shown on Figure 2.1. Table 2.7 includes those schemes where an application has been submitted and have either received consent or are awaiting a decision. Below the consented developments, there is also a single scheme at High Halstow which is 'reasonably foreseeable' but no application has been submitted to date. This scheme has been included in the cumulative assessment of this ES.

Table 2.7: Cumulative Schemes

Consented Developments: Planning Reference and Description		Status	Distance from the Site
1	Gridlink Interconnector, Kingsnorth Power Station (ref. MC/20/2738) The construction, operation and maintenance of a converter station, balance of plant and equipment, buildings related to materials storage and maintenance activities, internal roads and car parking, landscaping, access road and underground HVDC cable system from the converter station to the Mean High Water Springs.	Approved March 2021.	Within the Site boundary.
2	Gridlink Interconnector, Kingsnorth Power Station (ref. MC/21/0028) Application for a Lawful Development Certificate (proposed) for the installation of an underground 400 kV cable system between the new Gridlink Interconnector Ltd converter station site and the existing National Grid ESO Kingsnorth 400 kV sub-station located at the Kingsnorth Power Station.	Approved March 2021.	Within the Site boundary.
3	Damhead Creek II Power Station Combined Cycle Gas Turbine (CCGT) electricity generating station up to 1800 MW capacity.	Section 36 Electricity Act variation to consent (Ref: DAM/B/2.4/S36C Application)	Adjacent to the northern part of the Site boundary.
4	Kingsnorth Quarry Lane to the south of Stoke Road (ref. MC/12/0020) Variation of Condition 14 of planning consent MC/05/0589 – extraction and processing of sand and gravel, establishment of ready-mix concrete plant, restoration to agriculture and water-based conservation to defer the commencement date. It is proposed that the minerals will be worked in a phased manner, with progressive restoration taking place over an anticipated 11 years. An ES was submitted with the planning application to vary Condition 1.	Approved January 2013 works ongoing until 2024.	Approximately 350m to the west.

Consented Developments: Planning Reference and Description		Status	Distance from the Site
5	Kingsnorth Industrial Estate (ref. MC/08/0370) Outline application for the construction of a business park of up to 250,992 sqm for business, general industrial and storage and distribution uses B1C (20,752sqm), B2 (115,120sqm) and B8 (115,120sqm) with landscaping, parking and access. Reserved matters applications and discharge of conditions: • Ref. MC/10/1342: Reserved Matters Application for appearance, landscaping and scale of outline MC/08/0370. Approved in January 2011. Built out. • Ref. MC/13/0541: Reserved Matters Application for appearance, layout, scale and landscaping of outline MC/08/0370. Approved in May 2013. • Ref. MC/14/3646: Reserved Matters Application for appearance, layout, scale and landscaping of outline MC/08/0370 for development at Plot 5. Approved January 2015. Built out. • Ref. MC/15/1658: Reserved Matters Application for appearance, layout, scale and landscaping of outline MC/08/0370 for development at Plot 1. Approved with conditions in August 2015. Plot 1A unit built out. • Ref. MC/16/0479 and ref. MC/16/0475: Reserved Matters Application for appearance, layout, scale and landscaping of outline ref. MC/08/0370 for development at Plot 4. Approved with conditions in April 2016. Plot 4 unit built out. • Ref. MC/18/1878: Reserved Matters Application for appearance, layout, scale and landscaping of outline ref. MC/08/0370. Approved in September 2018. Not yet built. • Ref. MC/18/1979: Reserved Matters Application for appearance, layout, scale and landscaping of outline ref. MC/08/0370. Approved in October 2018. Not yet built. • Ref. MC/19/2757 Development of Plot 1B incorporating the construction of a warehouse building including Class B1(c) light industrial/ B2 general industrial/ B8 storage and distribution uses, access, parking, drainage, landscaping and associated works including means of access. Approved in October 2019. Not yet built.	Approved 2011 and currently being built out.	Approximately 500m to the north.
6	Stoke Road Business Centre, Stoke Road (ref. MC/17/4424) Outline planning application for up to 200 residential dwellings.	Approved August 2018. Subsequent reserved matters application was approved in July 2019 (ref: MC/19/0888)	Approximately 1.2km north-west.

Consented Developments: Planning Reference and Description		Status	Distance from the Site
7	Land south of Stoke Road, Hoo St Werburgh (ref. MC/19/3129) Outline application for up to 100 dwellings.	Approved November 2019.	Approximately 1.3km north west
8	Land at White House Farm Stoke Road (ref. MC/18/0247) Outline planning application for up to 65 dwellings.	Approved July 2018. Subsequent reserved matters application was validated in July 2019 (ref: MC/19/1736) and approved with conditions in March 2020.	Approximately 1.6km to the north west.
9	Street Farm, Stoke Road (ref. MC/15/0098) Redevelopment of former farm site to provide a residential development of up to 50 dwellings.	Approved November 2016. Subsequent reserved matters application has been approved (ref. MC/18/1795).	Approximately 1.7km to the north west.
10	Land south of Ratcliffe Highway Junction with Bells Lane (ref. MC/17/1884) Demolition of existing buildings and structures and redevelopment of the land south of Ratcliffe Highway, with a detailed application to provide up to 232 residential units with access, landscaping and open space.	Approved November 2017.	Approximately 2.9km to the north west
11	Land at Hillcrest, Ratcliffe Highway (ref. MC/19/3328) Detailed application for 21 dwellings including affordable housing, together with access, parking, landscaping and infrastructure works	Application validated December 2019.	Approximately 2.95km to the north west.
12	National Grid Property Holdings Grain Road (ref. MC/09/1628). Outline application for up to 464,685 sqm of built employment floorspace (Use class B1(c), B2 & B8) and up to 245 sqm of business park management centre with associated infrastructure and access. The outline application was revised in March 2015 (ref. MC/15/0702) with an application for approval of reserved matters to MC/09/1628 approved in July of 2015 with conditions (ref. MC/15/1051).	Approved March 2010.	Approximately 5km to the north east.
Reasonably Foreseeable Development: Planning Reference and Description		**Status**	**Distance from the Site**
13	Land South of Britannia Road, High Halstow Environmental Scoping Opinion Request for provision of up to 790 dwellings, two form entry primary school, provision of a retail unit or GP/pharmacy and access.	Decision of EIA required, 23rd April 2020 (ref. MC/20/0721).	Approximately 2.2km to the north west.

2.28 Each of the technical assessments considers the likely significant cumulative effects of the Development with the cumulative schemes set out in Table 2.7. The level of detail of assessment has been dependent on the information available for each scheme and has generally been undertaken in a qualitative manner. Where no cumulative effects are predicted, this has also been stated.

Interactive Effects

2.29 Interactive effects are also considered in the ES. Interactive effects arise where effects concerned with more than one technical discipline affect a single receptor. Examples include:

- Effects of air quality on ecology;
- Effects of landscaping on ecology; and
- Effects of ecology on the water environment.

2.30 Interactive effects are considered in Chapter 13 Summary and Residual Effects of the ES.

Assumptions and Limitations

2.31 The principal assumptions that have been made and any limitations that have been identified, in preparing this ES are set out below. Assumptions relevant to specific topics have been made in the appropriate chapter:

- Assessments assume the baseline conditions at the time of ES preparation (2021) unless otherwise stated in the technical chapter;
- It is assumed that current surrounding land uses do not change, with the exception of the committed and reasonably foreseeable developments identified;
- Assessments are based on the description of development set out in Chapter 3 Site and Development Description of the ES;
- Assessments are based on the anticipated construction methodology and phasing described in Chapter 5 Construction Methodology and Sequencing of the ES. All assessments have assumed that the construction of the Development is anticipated to commence in 2021, with the Development expected to be fully operational by 2031, with the exceptions of Chapter 10 Transport & Access, Chapter 11 Air Quality and Chapter 12 Climate Change of the ES. These assessments have assumed that the Development is expected to be fully operational by 2028, due to the limitations of the available traffic modelling. However, this represents a 'worst case' scenario assessment

in respect of these assessments;

- Assessments conclude the realistic 'worst case' effects that would arise from the outline element of the Development as defined by the parameters described in Chapter 3 Site and Development Description of the ES;
- Assessments in the ES have assessed the consented Gridlink Interconnector scheme (refs. MC/20/2738 and MC/21/0028), which is located within the Site boundary, for likely significant cumulative effects with the Development. The Development is a discrete project which would proceed independently from the consented Gridlink Interconnector;
- Assessments assume that no works are proposed to the existing jetty within and adjacent to the Site;
- Information received by third parties is complete and up to date;
- The design, construction and completed stages of the Development will satisfy minimum environmental standards, consistent with contemporary legislation, practice and knowledge;
- Significant environmental effects have been assessed using the Development parameters;
- Each chapter within the ES sets out the limitations and assumptions regarding any assessment scenarios that have been established in order to assess the Development;
- Conditions will be attached to the planning permission that will control disturbance during the construction works;
- Necessary off-site services infrastructure for the Development will be provided by statutory undertakers; and
- The planning permission, when granted, will contain conditions that will be sufficient to limit the Development to what has been assessed.

Objectivity

2.32 The technical studies undertaken within the ES have been progressed in a transparent, impartial and unbiased way with equal weight attached, as appropriate, to beneficial and adverse effects. Where possible, this has been based upon quantitative and accepted criteria together with the use of value judgments and expert interpretations.

2.33 The assessment has been explicit in recognising areas of limitation within the ES and any difficulties that have been encountered, including assumptions upon which the assessments are based. Where appropriate, the assessment of significance has been given confidence levels.

REFERENCES

[i] The *Town and Country Planning (Environmental Impact Assessment) Regulations 2017* (2017 No. 571) (as amended) (2018 No. 695) and (2020 No.505)
[ii] https://www.gov.uk/guidance/environmental-impact-assessment